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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,268	03/24/2004	Harry Sewell	1857.0790001	4101

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EXAMINER

MATHEWS, ALAN A

ART UNIT PAPER NUMBER

2851

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/807,268

Applicant(s)

SEWELL, HARRY

Examiner

Alan A. Mathews

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-9 and 12-17 is/are rejected.
- 7) ☒ Claim(s) 3,10,11 and 18-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9-10-04</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Claim Objections*

1. Claims 12 – 20 are objected to because of the following informalities: In claim 12, lines 11-13, “redirecting light reflected by **the second optical device** through the beam splitter onto a fourth optical device positioned opposite the first optical device” in step (e) does not logically follow step (d). It appears to the Examiner that step (e) should recite redirecting light reflected by **the third optical device**, since step (d) recites reflecting light from the third optical device. Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The instant application is a continuation of parent application 10/307,407. The original

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disclosure in the parent application 10/307,407, never described the beam splitter as comprising a first cube and a second cube. The recitation "a first cube; a second cube; and a spacer plate positioned between the first and second cubes" in claim 9 is **new matter**. The original disclosure described the beam splitter as having a first prism and a second prism and a spacer plate between the first and second prisms.

### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1, 2, 4 – 8, 12 - 17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of U.S. Patent No. 6.731.374. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 of U.S. Patent No. 6.731.374 recites a beam splitter, a first optical device (a reticle lens group), a second optical device (an aspheric mirror optical group), a third optical device (a fold mirror), and a fourth optical device (a wafer optical group). The last paragraph of claim 1 of U.S. Patent No. 6.731.374 recites reflecting the light 4 times, which is an

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even number of times before entering the fourth optical device. Claim 2 of U.S. Patent No.

6.731.374 recites a baffle plate located adjacent the fourth side of the beam splitter, wherein the baffle plate prevents background scattered light generated by internal reflections of light within said beam splitter from entering the wafer optical group (fourth optical device). Claim 4 of U.S.

Patent No. 6.731.374 recites that the aspheric mirror optical group (second optical device)

comprises a plurality of lenses. Claim 5 of U.S. Patent No. 6.731.374 discloses that the wafer

optical group (fourth optical device) comprises a plurality of lenses. Claim 6 of U.S. Patent No.

6.731.374 discloses that the fold mirror optical system (third optical device) comprises a fold mirror having an optical power. With respect to independent claim 12 of the instant application,

claim 13 of U.S. Patent No. 6.731.374 discloses directing light into a beam splitter, redirecting

light from the beam splitter toward an aspheric mirror (second optical device), reflecting light

from the aspheric mirror (third optical device) into the onto a fold mirror (third optical device),

and reflecting light from the fold mirror (third optical device) into the beam splitter, and passing

the light reflecting from the fold mirror (third optical device) through the beam splitter.

### *Allowable Subject Matter*

6. Claims 3, 10, and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 18-20 are objected to for the reasons specified in paragraph #1, but would be allowable if the objection to parent claim 12 is corrected. Claim 9

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would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action by substituting “a first prism” for “a first cube” and substituting “a second prism” for “a second cube” and substituting “a spacer plate positioned between the first and second prism” for “a spacer plate positioned between the first and second cubes” and to include all of the limitations of the base claim and any intervening claims. Claims 1, 2, 4-8 and would be allowable subject to filing a proper terminal disclaimer. Claims 12-17 and would be allowable subject to correction of the objection to parent claim 12 and subject to filing a proper terminal disclaimer. In conclusion, all the claims would be allowable if a proper terminal disclaimer were filed and if all the objections and rejections in paragraphs # 1 and #3 were corrected. The reasons for the indicated allowability of the claims are as follows:

The prior art of record does not disclose or suggest a second optical device located adjacent a second side of the beam splitter and a third optical device located adjacent a third side of the beam splitter **opposite** the second optical device and a fourth optical device located adjacent a fourth side of the beam splitter and **opposite** the first optical device in combination with all the other elements recited in independent claim 1. In particular, in figures 3 and 5 of Oomura (U. S. Patent No. 5,796,524), G1 would be the first optical device, M2 would be the second optical device, M3 would be the third optical device, and G3 would be the fourth optical device. But M2 and M3 are **not opposite** each other, and G1 and G4 are **not opposite** each other.

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The prior art of record does not disclose or suggest reflecting light from the second optical device, through the beam splitter, and onto a third optical device that is positioned opposite the second device; and reflecting light from the third optical device into the beam splitter, and redirecting light reflected by the third optical device (**subject to correcting claim 12 in this manner**) through the beam splitter onto a fourth optical device positioned opposite the first optical device in combination with all the other steps recited in independent claim 12.

### ***Conclusion***

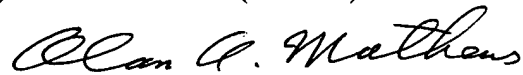
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents on Applicant's PTO 1449 are cited for the same reasons Applicant cited them in his INFORMATION DISCLOSURE STATEMENT. The patent to Koyama et al. is cited to show optical devices on all four sides of beam splitter 16 in figure 6.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan A. Mathews whose telephone number is (571) 272-2123. The examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alan A. Mathews  
Primary Examiner  
Art Unit 2851

AM